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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,878	01/09/2002	Samya Boxberger-Oberoi	S1410/P028US/10107146	6277
27517	7590	02/10/2005	EXAMINER	
FULBRIGHT & JAWORSKI L.L.P. 2200 ROSS AVENUE SUITE 2800 DALLAS, TX 75201			PIERRE, MYRIAM	
			ART UNIT	PAPER NUMBER
			2654	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/043,878	BOXBERGER-OBEROI ET AL.	
	Examiner	Art Unit	
	Myriam Pierre	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-31 is/are rejected.
- 7) Claim(s) 10 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some *
 - c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 08/11/2003.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10 and 12 are rejected under U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

The term "duration number" in claim 10 is used by the claim to mean "numerical passing of time or day", while the accepted meaning is "tracking an event numerically". The term is indefinite because the specification does not clearly redefine the term. The examiner has interpreted "duration" to mean, "clock (ed) time".

The term "elements" in claim 12 is used by the claim to mean "numerical characters" in a text, while the accepted meaning is "characters in a text". The term is

indefinite because the specification does not clearly redefine the term. The examiner has interpreted "elements" to mean, "numbers".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-5, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Hyde-Thomson (6,487,533).

As to claim 1, Hyde-Thomson teaches

a text-to-speech engine (**Fig. 2, elements 245, 242-4**) that receives text-based information (**Fig. 3, step 300**) and converts the text-based information to spoken words (**Fig. 3, step 316**); and

a set of locale-specific rules (**language identification**) that define how certain text-based information should be interpreted (“**...language identification based upon the statistical occurrences of three-letter combinations**”, col. 5, lines 64-65).

Language identification is based on rules such as statistical occurrences) in the text-to-speech (**col. 6, line 2**), wherein set of locale-specific rules include text (**text-to-text conversion, col. 7, line 48-49**. **Textual language identification is performed for text-to-text as well**) interpretation rules (**rule based, col. 1, line 57**) for a plurality of languages (**language which user is most comfortable with, col. 7, lines 51-52**).

As to claim 2, Hyde-Thomson teaches,

a text message (**textual input, col. 6, line 7**) storage device (**memory, element 210, Fig. 2**) for storing a plurality of text messages (**store messages, col. 5, line 2**), wherein text messages may be transmitted (**electronic mail, col. 4, line 1**) to the text-speech engine (**Fig. 2, elements 242-244**) for conversion to a corresponding audio message (**translate audio information by text-to-speech engine, col. 1, lines 44-45**).

As to claim 3, Hyde-Thomson teaches,

A processor (**processing unit, col. 4, lines 66-67**) to be used for conversion of a text-based information (**text-to-text conversion, col. 7, line 48-49**. The processing unit works with the trigraph analyzer which performs text based conversions or translations) for identifying a desired locale (**language identifier, col. 6, line 4 and col. 5, lines 51, 56-58**. The language identifier is an n-character statistical model used to automatically derive the desired language from memory.).

As to claim 4, Hyde-Thomson teaches,
desired locale (**language**) corresponding to a locale (**language**) identified by user (**subscriber**) who will receive converted text-based information (**text-to-text, language which the subscriber is most comfortable, col. 7, lines 47-48 and 51-52**).

As to claim 5 Hyde-Thomson teaches,
locale (**language**) corresponds to a locale (**language**) that is associated with the text-based information that is to be converted (**text-to-text language translation, col. 48-49**).

As to claim 7, Hyde-Thomson teaches,
identifying (**language identification**) a selected locale (**language**) to be used when converting (**conversion, col. 7, line 48**) text to speech (**text to speech**

conversion, language preference selections for subscriber, col. 7, lines 41-42, 53-54);

identifying (**language identification**) one or more elements (**characters**) in text (**textual input comprises of characters, col. 6, line 9**) that should be interpreted using locale-specific rules (**implied by language identifier, col. 7, line 47**).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533) in view of August et al. (2003/0028378).

As to claim 6 Hyde-Thomson teaches,

A set of locale-specific (language**) rules is organized in a hierarchical manner (**gram language identification, col. 5, line 52**) in which text interpreted rules (**text samples...rule-based, col. 5 line 39, & col. 1, line 57**).**

Hyde-Thomson does not explicitly teach lower and higher hierarchy.

At the time of then invention, it would have been obvious to one of ordinary skill in the art to use a rule based language that grouped text in lower and higher hierarchy

that classifies text for adding or combining common concepts for organizing common characters according to rules in order for quicker processing.

Hyde-Thomson does not explicitly teach rules that are common to two or more locales (**languages**).

However, August teaches of using rules (**page 7, paragraph 4**) that are common to two locales (**languages**) (**sub-words of two languages mapped together, hence using common rules for two languages, page 7, paragraph 0081**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Hyde-Thomson's locale-specific rules that incorporates August's common language rules in order for the speech synthesizer "to illustrate sound alike comparison", as taught by August, col. 7, paragraph 81.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533), further in view of Hon (2001/0044724).

As to claim 8, Hyde-Thomson does not teach the group of elements that is cited.

However, Hon teaches, TTS from
numbers (**page 3, paragraph 33**);
characters (**page 6, paragraph 55**);
symbols (**page 6, paragraph 52**);
abbreviations (**page 3, paragraph 33**); and
punctuation marks (**page 3, paragraph 32**).

At the time of the invention, it would have been obvious to use Hyde-Thomson's text-to-speech system with Hon's textual elements in order to provide flexibility in the speech synthesizer's ability to recognize various elements within a text for proper enunciations of various elements used in proofreading for grammatical and punctuation errors, as taught by Hon, page 1, paragraphs 4 and 9.

8. Claims 9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533) in view of Hon (2001/0044724), as applied to claim 7, in further view of Flach (IEEE ICASSA 2000).

As to claim 9,

Hyde-Thomson does not teach identifying numbers or determining number types.

But Hon teaches identifying numbers in text (**text...expanding numbers, page 3, paragraph 33**).

Determining the number type of said one or more numbers (**expanding numbers and monetary amounts, page 3, paragraph 33**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art use Hyde-Thomson's text-to-speech system with Hon's identification of numerals in a text for flexibility, in order to provide further analysis of the text for the best pre-selected phoneme-based system (the text analyzer uses a text-to-speech converter that concatenates the best pre-selected phoneme, page 3, paragraph 33 and page 4, paragraph 36).

As to claim 11,

Hyde-Thomson does not teach determining cases of elements for TTS.

However, Flach teaches

case (page 1293, left column, 1st paragraph).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to determine the case of an element or character in a text for context-correct conversion in a text-to-speech system, as taught by Flach, **page 1293, left column, 1st paragraph.**

As to claim 12,

Hyde-Thomson does not teach determining proper gender of elements for TTS.

However, Flach teaches

gender (page 1293, left column, 1st paragraph).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to determine the gender of an element or character in a text for context-correct conversion in a text-to-speech system, as taught by Flach, **page 1293, left column, 1st paragraph.**

9. Claim 10 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Hyde-Thomson et al. (6,87,533) in view of Hon et al. (2001/0044724) and Flach et al. (IEEE 2000), as applied to claim 9, and in further view of Malsheen et al. (5,634,084).

As to claim 10, Neither Hyde-Thomson nor Hon teach TTS of number types.

However, Flach teaches

a time **and includes** duration number (**clock times, page 1291, left column, 2nd paragraph**); and

counting number (**a sequence of basic numerals, page 1291, left column, 3rd paragraph**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use a speech synthesizer that recognizes number types in order to have correct processing of number formats, as taught by Flach, page 1291, left column, 2nd paragraph.

Flach does not teach TTS date, key, telephone, and address numbers.

However, Malsheen teaches a number expander (**col. 7, line 44**) for TTS (**col. 7, line 62**) that includes

a date (**col. 7, line 49**); and

a telephone number (**col. 7, line 49**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art for a speech synthesizer that recognizes text numbers types such as dates, telephone numbers for to make TTS useful for intelligent interpretation of even the most ill-formed text messages, as taught by Malsheen (**col. 1, lines 39-41**).

Malsheen suggests address (**geographic destinations, col. 3, line 3**) but not key numbers.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include key numbers as number types for added flexibility in the speech synthesizer's ability to enunciate various number types.

10. Claims 13-18, 26 and 29 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Hyde-Thomson et al. (6,87,533) in view of Malsheen et al. (5,634,084), and in further view of Flach et al. (IEEE ICASP 2000).

As to claims 13 and 19, Hyde-Thomson teaches component part (**audio**) of a system prompt that is played for a caller (**caller can remotely listen to message or at computer...audio information by a TTS engine, col. 2, lines 3-7,11-13 & col. 1, line 44**); component parts (**audio**) are to be concatenated to form the system prompt (**message inquiry unit playback, voice message, col. 2, line 64-67**); and a selected locale (**language**) that is associated with the text file (**electronic mail, text to speech conversion for various language, col. 4, line 1 and col. 5, lines 21-22**); and a set of locale-specific rules (**implied by language identifier, col. 7, line 47**).

Hyde-Thomson does not explicitly teach identifying and classifying numbers/digits.

However, Malsheen teaches

digits (col. 7, line 55) in the text file (email, col. 4, line 63) that is being converted to speech (passes result to TTS converter, col. 7, line 62); and identifying the digits as a time, date, or number (determines the time, date or type of number, col. 7, lines 46-47. The Number expander determines the different number types, the process is a type of classification or sorting of different kinds of numbers).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify and classify digits having locale-specific rules in order to properly convert text to spoken words, as taught by Malsheen, col. 2, line 55.

Hyde-Thomson does not teach determining selected locale (**language**) associated with the caller.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the language of the caller for the system prompt, thus providing user-friendliness in the system by using the corresponding language of the caller/speaker.

Hyde-Thomson does not teach accessing locale rules for digits.

However, Flach teaches using locale rules (6 languages) to determine how to convert the digits (numbers) to speech (**page 1291, left column 3rd paragraph**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use locale rules for converting digits to speech in order for ease and minimal effort in translations, as taught by Flach, page 1292 left column 1st paragraph.

As to claim 14 and 20, Neither Hyde-Thomson nor Malsheen nor Flach teach

classifying a time as a 12-hour time format or a 24-hour time format.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to classify time in military or standard formats in order for the synthesizer to properly specifying the time of day in digit format, or a.m., p.m., because this enables the TTS system to interpret responses from the text that are in various formats.

As to claim 15 and 21, Hyde-Thomson does not teach identifying date formats.

However, Malsheen teaches

a date format (**col. 7, line 49**) for digits (**col. 7, line 55**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Hyde-Thomson's TTS language identifier that utilizes date format for flexibility in the synthesizer, thus the date format is appropriate for the corresponding text language.

As to claim 16 and 22, Neither Hyde-Thomson nor Malsheen teach number format for digits.

However, Flach teaches

a number format for the digits (**digit..formats, page 1293 left column 1st paragraph**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to Hyde-Thomson's speech synthesizer that reads number formats for digits in order for flexibility in the context-correction conversion of number sequences, which

includes special kinds of formats, as taught by Flach, **page 1293, left column, 1st paragraph.**

As to claim 17 and 23 Neither Hyde-Thomson nor Malsheen teach identifying case.

However, Flach teaches a case for digits (**digits...case, page 1293 left column 1st paragraph**) before the digits are converted to speech (text preprocessor of TTS system, **(page 1293 left column 1st paragraph. Text preprocessor would identify the case for digits before applying it to the TTS system).**

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify case for digits for flexibility in the context-correction conversion of number sequences, which includes identifying case format, as taught by Flach, **page 1293, left column, 1st paragraph.**

As to claim 18 and 24, Neither Hyde-Thomson nor Malsheen teach identifying gender.

However, Flach teaches a gender for the digits (**digits...gender, page 1293 left column 1st paragraph**) before the digits are converted to speech (**page 1293 left column 1st paragraph. Text**

preprocessor would identify the gender for digits before applying it to the TTS system).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify gender for flexibility in the context-correction conversion of number sequences, which includes identifying gender format, as taught by Flach, **page 1293, left column, 1st paragraph.**

As to claim 25 Hyde-Thomson teaches
prerecorded audio messages (**prerecorded message, Fig. 3 element 318**).

As to claim 26 Neither Hyde-Thomson nor Malsheen nor Flach explicitly teach digital files having a WAV format or an MP3 format.

At the time of the invention, it would have been obvious to one of ordinary skill in the art for the digital files to have .WAV or MP3 formatting streaming audio server to support these well known static file formats for use in a readily available media player.

As to claim 29, Hyde-Thomson teaches
Locale-specific date rules (**implied by textual language identification, col. 5, line 39-40**).

Hyde-Thomson does not teach converting dates to speech.

Malsheen teaches

to convert date to speech (**determines the time, date or type of number, text-to-speech converter, col. 7, lines 46-47 & line 62**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify and classify digits having locale-specific rules in order to properly convert text to spoken words, as taught by Malsheen, col. 2, line 55.

11. Claims 27-28, and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533) in view of Hon (2001/0044724).

As to claim 27, Hyde-Thomson teaches

a selected locale (language) to be used in converting text to speech (language. Identification...conversion of textual messages into speech...electronic mail, col. 2, lines 40-42 and 47);

one or more numbers in a text file (electronic mail) that is being converted to speech (electronic mail, text to speech conversion for various language, col. 4, line 1 and col. 5, lines 21-22); and

a set of locale-specific rules (n-gram for textual language identification, col. 5, line 39-40) associated with the selected locale (language)(selects TTS engine 242-46..engines 242-244 correspond to various languages in memory, col. 7, lines 14-15 and col. 5, lines 21-22).

Hyde-Thomson teaches

in the text file (electronic mail) to speech using locale-specific (language) rules (n-gram for textual language identification, col. 5, line 39-40).

Hyde-Thomson does not explicitly teach converting numbers.

However, Flach teaches

converting the one or more numbers (**sequence of numbers, tens, digits, and hundreds, page 1291, right columns, 1st paragraph**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to convert one or more numbers using language rules in order for flexibility in the synthesizer reading numbers because numbers can occur in several grammatical contexts, as taught by Flach, page 1293, left column, 1st paragraph.

As to claim 28,

Neither Hyde-Thomson nor Flach teach

classifying a time as a 12-hour time format or a 24-hour time format.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to classify time in military or standard formats in order for the synthesizer to properly specifying the time of day in digit format, or a.m., p.m., because this enables the TTS system to interpret responses from the text that are in various formats.

Hyde-Thomson teaches locale-specific rules (**implied by textual language identification, col. 5, line 39-40**).

However, Hyde-Thomson does not teach converting time to speech.

Flach teaches converting time to speech (**speech synthesis ...clock time, page 1291, left column, 2nd paragraph**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use a speech synthesizer to convert time to speech in order flexibility in the synthesizer detecting and transforming the various formats of numbers into sound that is familiar to the listener, as taught by Flach, page 1203, left column, 1st paragraph.

As to claim 30, Hyde-Thomson does not teach determining case.

However, Flach teaches

Proper case (**case, page 1293 left column 1st paragraph**) to be used for numbers (**digits**) when numbers (**digits**) are converted to speech (**page 1293 left column 1st paragraph. Text processor would identify the case for digits before applying it to the TTS system**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify case for digits for flexibility in the context-correction conversion of number sequences, which includes identifying case format, as taught by Flach, **page 1293, left column, 1st paragraph**.

As to claim 31, Hyde-Thomson does not teach determining gender.

However, Flach teaches

Proper gender (**gender, page 1293 left column 1st paragraph**) to be used for numbers (**digits**) when numbers (**digits** are converted to speech (**page 1293 left column 1st paragraph. Text processor would identify the gender for digits before applying it to the TTS system**).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify gender for flexibility in the context-correction conversion of number sequences, which includes identifying gender format, as taught by Flach, **page 1293, left column, 1st paragraph.**

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure Silverman (5,890,117), Vermeulen et al. (6,810,379), Vitale et al. (6,347,295), and Ladd et al. (6,269,336).

Silverman teaches prosodic shaping of text, automated synthesis recognizing telephone numbers, punctuation marks, address, and other characters.

Vermeulen et al. teach text-to-speech system that recognizes abbreviations, numbers, addresses, telephone numbers, dates/times, and punctuation marks.

Vitale et al. teach phoneme rules for text-to-speech system recognizing characters such as telephone numbers and punctuation marks.

Ladd et al. teach voice processing of military or standard time, using markup language.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Myriam Pierre whose telephone number is 703-605-

1196. The examiner can normally be reached on Monday – Friday from 5:30 a.m. - 2:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Smits can be reached on 703-306-3011. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

01/27/05


RICHMOND DORVIL
SUPERVISORY PATENT EXAMINER